NON-PUBLIC?: N
ACCESSION #: 9209300323
LICENSEE EVENT REPORT (LER)

FACILITY NAME: H. B. ROBINSON STEAM ELECTRIC PLANT, PAGE: 1
UNIT NO. 2

DOCKET NUMBER: 05000261

TITLE: UNUSUAL EVENT DUE TO LOSS OF OFF-SITE POWER AND REACTOR TRIP
EVENT DATE: 08/22/92 LER #: 92-017-00 REPORT DATE: 09/21/92

OTHER FACILITIES INVOLVED: DOCKET NO: 05000

OPERATING MODE: N POWER LEVEL: 100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION:
50.73(a)(2)(i)
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: R. D. CROOK, SR. SPECIALIST - TELEPHONE: (803) 383-1179
REGULATORY COMPLIANCE

COMPONENT FAILURE DESCRIPTION:
CAUSE: SYSTEM: COMPONENT: MANUFACTURER:
REPORTABLE NPRDS:

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

On Saturday, August 22, 1992, H. B. Robinson Unit No. 2 was operating at one hundred percent power. At 1007 hours a loss of offsite power occurred due to a trip of the Startup Transformer. The loss of the Startup Transformer caused a loss of Emergency Bus E-2 and Instrument Bus 4, causing a turbine runback. At 1009 hours, a high level in "A" Steam Generator caused a turbine trip and a subsequent reactor trip. At 1010 hours the Auxiliary Transformer tried to transfer its load to the Startup Transformer as designed, and a loss of E-1 resulted. At 1012 hours the Emergency Operating Procedures network was entered and immediate actions were begun for response to the reactor trip. In accordance with the Emergency Plan, an Unusual Event was declared at 1025 hours due to loss of offsite power. The plant was stabilized and repairs were initiated on

the startup Transformer.

The Startup Transformer trip vas caused by a short circuit in the sudden pressure fault protective relay sensing circuitry. During the event, the plant response performed as expected. There was no threat to public safety since both Emergency Diesel Generators started as required and provided power to the Emergency Busses. Repairs to the Startup Transformer were completed and normal power vas restored to the Emergency Busses at 0050 hours on Sunday, August 23, 1992. The Unusual Event was terminated at 0124 hours.

This report is submitted pursuant to 10 CFR 50.73(a)(2)(i)(C) and 10 CFR 50.73(a)(2)(iv).

END OF ABSTRACT

I. DESCRIPTION OF EVENT

On Saturday, August 22, 1992, H. B. Robinson Unit No. 2 1_/ was operating at one hundred percent power, with no major evolutions or activities in progress. At 1007 hours a loss of offsite power occurred due to a trip of the Startup Transformer.2_/ The loss of the Startup Transformer caused a loss of Emergency Bus E-2 and Instrument Bus 4, causing a turbine runback. Due to the loss of E-2, Emergency Diesel Generator "B" started and loaded properly. The primary plant transient caused the Reactor Coolant System (RCS) inventory to shrink, lowering the level in the Pressurizer to below ten percent. At 1009 hours, a high level in "A" Steam Generator caused a turbine trip and a subsequent reactor trip. At 1010 hours the Auxiliary Transformer tried to transfer its load to the Startup Transformer as designed, and a loss of E-1 resulted, causing the "A" Emergency Diesel Generator to start and load as required. At 1012 hours the Emergency Operating Procedures network was entered and immediate actions were begun for response to the reactor trip. A manual safety injection was initiated at 1018 hours due to the decrease in Pressurizer level and the inability to maintain level with the Charging Pumps. Pressurizer level recovered within a short period of time and the safety injection was reset at 1021 hours. In accordance with the Emergency Plan, an Unusual Event was declared at 1025 hours due to loss of offsite power. As a precautionary measure due to the nature of the event, the onsite Technical Support Center and Operations Support Center were activated to support plant response. At 1037 hours, the safety injection was terminated. At 1052 hours, the backup Pressurizer Heaters were energized from the

emergency buses, and at 1103 hours Natural Circulation was verified with RCS temperatures stable at approximately 500 degrees F. The plant was stabilized and repairs were initiated on the Startup Transformer. At 1348 hours, a deviation from Emergency Operating Procedure EPP-021 was taken in order to restore power to the Deepwell Pumps to supply the Condensate Storage Tank.

The NRC was notified of this event via the ENS pursuant to 10 CFR 50.72(a)(1)(i) as a declaration of one of the Emergency Classes specified in the licensee's approved Emergency Plan. The NRC was notified via the ENS of the procedure deviation mentioned above pursuant to 10 CFR 50.72(b(l)(i) as a deviation from the plant's Technical Specifications pursuant to 50.54(x).

1_/ H. B. Robinson Steam Electric Plant, Unit No. 2, is a Westinghouse Pressurized Water Reactor in commercial operation since March, 1971.

2_/ Adverse Condition Report ACR 92-307

II. CAUSE OF EVENT

The start-up transformer trip was caused by a short circuit in the sudden pressure fault protective relay sensing circuitry. This short circuit was the result of water collecting in the base of the cable connector at the relay (see attached photograph). A cable connects the relay to a junction box approximately two and one half feet away, and about six inches above the relay. The cable houses three conductors which connect the relay to the transformer protective circuitry. This cable is hollow with the conductors loose inside. The junction box, which is designed with a drain hole for removal of moisture, had been inadvertently rotated to the point where the drain hole allowed water to collect inside. The water subsequently entered the hollow cable and traveled to the base of the relay/cable connector, where it shorted across two soldered connections.

The reactor trip was caused by a high steam generator level resulting from loss of instrument busses powered from the start-up transformer.

III. ANALYSIS OF EVENT

During this event, there was no threat to public safety since both Emergency Diesel Generators started as required and provided power to the Emergency Buses. In addition, the Dedicated Shutdown Diesel Generator was available throughout the event to
supply power if
called upon. Appropriate provisions are available in the Emergency Operating Procedures to control the Plant for an extended period of time until some form of AC power is restored (i.e., offsite power, Emergency Diesels, or the Dedicated Shutdown Diesel).

This report is submitted pursuant to 10 CFR 50.73(a)(2)(i)(C) and 10 CFR 50.73(a)(2)(iv).

IV. CORRECTIVE ACTIONS

Repairs to the start-up transformer were completed and normal power was restored to the emergency busses at 0050 hours on Sunday, August 23, 1992. The Unusual Event was terminated at 0124 hours.

V. ADDITIONAL INFORMATION

A. Failed Component Information

None

B. Previous Similar Events

LER-86-005

Figure "Sudden Pressure Fault Protective Relay Circuitry (Correct Position)" omitted.

CP&L
Carolina Power & Light Company

ROBINSON NUCLEAR PROJECT DEPARTMENT
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SEP 21 1992

Robinson File No: 13510C RNPD/92-2441
(10CFR50.73)

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261
LICENSE NO. DPR-23
LICENSEE EVENT REPORT NO. 92-017-00

Gentlemen:

The enclosed Licensee Event Report (LER), is submitted in accordance with 10 CFR 50.73 and NUREG 1022, Supplements No. 1 and 2.

Very truly yours,

R. H. Chambers
General Manager
H. B. Robinson S. E. Plant

RDC:sgk

Enclosure

cc: Mr. S. D. Ebneter
Mr. L. W. Garner
INPO

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